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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,932	08/30/2002	Yutaka Nakajima	IP2205002US	2358
23419	7590	05/01/2006	EXAMINER	
COOLEY GODWARD, LLP 3000 EL CAMINO REAL 5 PALO ALTO SQUARE PALO ALTO, CA 94306			DUONG, FRANK	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/064,932

Applicant(s)

NAKAJIMA, YUTAKA

Examiner

Frank Duong

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,8 and 10-14 is/are rejected.
- 7) ☒ Claim(s) 6,7 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


FRANK DUONG
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is a response to communications dated 08/30/02. Claims 1-12 are pending in the application.

Specification

2. The disclosure is objected to because of the following informalities:

Page 16, "Figures" should be deleted.

Appropriate correction is required.

Information Disclosure Statement

3. The information disclosure statement filed 10/31/02 complies with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. It has been considered and placed in the application file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-5, 8 and 10-14 are rejected under 35 U.S.C. 102(e) as being anticipated by

Abrishami et al (USP 6,463,135) (hereinafter "Abrishami").

Regarding **claim 1**, in accordance with Abrishami reference entirety, Abrishami shows an interconnecting device (*Fig. 3 and description at col. 8, line 46 to col. 9, line 30 and thereafter*) for relaying a voice call and a fax communication of a communication terminal (*Fig. 1; element 10-11*) between an analog line (*Fig. 3; To/From PCM*) and a digital line (*Fig. 3; To/From Narrowband Network*), the digital line having a bandwidth being controlled by a control apparatus (*Fig. 4; element 22A*) said interconnecting device (*Fig. 3*) comprising:

a start signal receiving unit (*Fig. 3; element 31*) for receiving a fax communication start signal from the communication terminal through the analog line, the fax communication start signal indicating a start of the fax communication (*col. 9, lines 5-6, Abrishami discloses detector 31 discriminates the voice call and a facsimile*); and

a request signal sending unit (*Fig. 3; element 31*) for requesting of the control apparatus (*Fig. 4; element 22A*) that the bandwidth of the digital line available to said interconnecting device be expanded from in the voice call when said start signal receiving unit receives the fax communication start signal (*col. 9, lines 6-13, Abrishami further discloses detector 31 notifies control process 22 and requests for the available bandwidth that can be allocated to that call without effecting the operations of the other virtual channels*).

Regarding **claim 2**, in addition to features recited in base claim 1 (see rationales discussed above), Abrishami further discloses wherein, when said start signal receiving unit receives the fax communication start signal while said interconnecting device relays

the voice call of the communication terminal, said request signal sending unit requests that the bandwidth be expanded (*col. 9, lines 15-22, Abrishami discloses the adjustment of the bandwidth on-demand may be used to either increase or decrease the rate of transmission of the FAX. At col. 9, lines 24-30, Abrishami gives a specific example of how bandwidth manager 22A maintains the link budget for all virtual channels associated with the entire module and assigns (expands) the appropriate bandwidth based on the direction of a FAX call for each channel of a DSP).*

Regarding **claim 3**, in addition to features recited in base claim 1 (see rationales discussed above), Abrishami further discloses wherein said start signal receiving unit receives a calling tone (CNG) signal serving as the fax communication start signal from the communication terminal (*col. 8, lines 50-60, Abrishami discloses the first step is call setup, during which a calling FAX machine dials the telephone number of a called FAX machine; col. 9, lines 15-22, Abrishami discloses detector 31 discriminates the voice and fax call and fax terminal 11 of Fig. 1 is T.30 compliant (col. 1, line 34 to col. 2, line 18 and thereafter). Thus CNG signal is inherent in the call establishment of T.30 standard).*

Regarding **claim 4**, in addition to features recited in base claim 3 (see rationales discussed above), Abrishami further discloses wherein said request signal sending unit requests that the bandwidth be changed from 8 kbit/s, 6.3 kbit/s, or 5.3 kbit/s to 64 kbit/s (*Abrishami discloses channel rate of digital network 15 is equal to or greater than the native fax rate (2440, 4800, 9600, or 14,400 bps) and at col. 8, lines 46-67, Abrishami discloses FAX relay gateway in a digital packet network (ISDN) and at col. 9, line 3-14,*

Abrishami also discloses controller 22 assigns the maximum bandwidth (64 kbps equivalent to a B-channel in digital network 15). Thus, Abrishami implicitly discloses the claimed limitation in a manner as recited).

Regarding **claim 5**, in addition to features recited in base claim 3 (see rationales discussed above), Abrishami further discloses a signal conversion unit (*Fig. 3; elements 35 and 36*) for converting a voice signal received from the communication terminal into a digital signal; and a conversion mode determination unit (*Fig. 3; element 31*) for determining a conversion mode of said signal conversion unit based on whether or not said start signal receiving unit receives the fax communication start signal (*col. 6, lines 56-67, Abrishami discloses detector 31 controls switch 33 to appropriately switch an incoming signal to either element 34, elements 35-36 or elements 37-38 for processing*).

Regarding **claim 8**, in accordance with Abrishami reference entirety, Abrishami shows an interconnecting device (*Fig. 1; element 14 or Fig. 2; element 20*) for relaying a voice call and a fax communication from a communication terminal (*Fig. 1; 10, 11 or 12*), between an analog line (*Fig. 2; To/From PCM Data Source*) and a digital line (*Fig. 2; To/From Narrowband Network*), comprising:

a start signal receiving unit (*Fig. 3; element 31*) for receiving a fax communication start signal from the communication terminal, the fax communication start signal indicating a start of the fax communication (*col. 9, lines 5-6, Abrishami discloses detector 31 discriminates the voice call and a facsimile*);

a signal conversion unit (*Fig. 3; elements 35 and 36*) for converting a voice signal received from the communication terminal into a digital signal (*col. 6, lines 56-67,*

Art Unit: 2616

Abrishami discloses detector 31 controls switch 33 to appropriately switch an incoming signal to either element 34, elements 35-36 or elements 37-38 for processing); and

a conversion mode determination unit (Fig. 3; element 31) for determining a conversion mode of said signal conversion unit based on whether or not said start signal receiving unit receives the fax communication start signal (col. 6, lines 56-67, Abrishami discloses detector 31 controls switch 33 to appropriately switch an incoming signal to either element 34, elements 35-36 or elements 37-38).

Regarding **claim 10**, in accordance with Abrishami reference entirety, Abrishami discloses a communication control method (*Figs. 1-4 and col. 6, line to col. 9, line 35*) of an interconnecting device for relaying a voice call and a fax communication between an analog line and a digital line, comprising:

receiving a fax communication start signal from a communication terminal through the analog line, the fax communication start signal indicating a start of the fax communication (col. 9, lines 5-6, Abrishami discloses detector 31 discriminates the voice call and a facsimile); and

requesting of a control apparatus for controlling the digital line that a bandwidth of the digital line available to the interconnecting device be expanded from in the voice call when the fax communication start signal is received in said start signal receiving step (col. 9, lines 6-13, Abrishami further discloses detector 31 notifies control process 22 and requests for the available bandwidth that can be allocated to that call without effecting the operations of the other virtual channels).

Regarding **claim 11**, in accordance with Abrishami reference entirety, Abrishami discloses a communication control method (*Figs. 1-4*) of an interconnecting device for relaying a voice call and a fax communication between an analog line (PCM Data Source) and a digital line (Narrowband Network), comprising:

receiving a fax communication start signal from a communication terminal for conducting the voice call and the fax communication, said fax communication starting signal indicating a start of the fax communication (*col. 9, lines 5-6, Abrishami discloses detector 31 discriminates the voice call and a facsimile*);

converting a voice signal received from the communication terminal into a digital signal (*col. 6, lines 56-67, Abrishami discloses detector 31 controls switch 33 to appropriately switch an incoming signal to either element 34, elements 35-36 or elements 37-38 for processing*); and

determining a conversion mode of said signal conversion step based on whether or not the fax communication start signal is received in said start signal receiving step (*col. 6, lines 56-67, Abrishami discloses detector 31 controls switch 33 to appropriately switch an incoming signal to either element 34, elements 35-36 or elements 37-38*).

(note: claim 12 calls for a computer program performing functional steps of method claim 1. It is rejected by the same rationales discussed above)

Regarding **claim 12**, in accordance with Abrishami reference entirety, Abrishami discloses a computer readable recording medium for storing a communication control

Art Unit: 2616

program intended for an interconnecting device for relaying a voice call and a fax communication between an analog line and a digital line, the communication control program operating said interconnecting device as: start signal receiving means for receiving a fax communication start signal from a communication terminal through the analog line, the fax communication start signal indicating a start of the fax communication (*col. 9, lines 5-6, Abrishami discloses detector 31 discriminates the voice call and a facsimile*); and request signal sending means for requesting of a control apparatus for controlling the digital line that a bandwidth of the digital line available to said interconnecting device be expanded from in the voice call when said start signal receiving means receives the fax communication start signal (*col. 9, lines 6-13, Abrishami further discloses detector 31 notifies control process 22 and requests for the available bandwidth that can be allocated to that call without effecting the operations of the other virtual channels*).

(note: claim 13 calls for a computer program of apparatus claim 8. It is rejected by the same rationales discussed above)

Regarding **claim 13**, in accordance with Abrishami reference entirety, Abrishami a computer readable recording medium for storing a communication control program intended for an interconnecting device for relaying a voice call and a fax communication between an analog line and a digital line (Figs. 1-4), the communication control program

Art Unit: 2616

operating said interconnecting device as: start signal receiving means for receiving a fax communication start signal from a communication terminal for conducting a voice call and a fax communication, the fax communication start signal indicating a start of the fax communication (*col. 9, lines 5-6, Abrishami discloses detector 31 discriminates the voice call and a facsimile*); signal conversion means for converting a voice signal received from the communication terminal into a digital signal (*col. 6, lines 56-67, Abrishami discloses detector 31 controls switch 33 to appropriately switch an incoming signal to either element 34, elements 35-36 or elements 37-38 for processing*); and conversion mode determination means for determining a conversion mode of said signal conversion means based on whether or not said start signal receiving means receives the fax communication start signal (*col. 6, lines 56-67, Abrishami discloses detector 31 controls switch 33 to appropriately switch an incoming signal to either element 34, elements 35-36 or elements 37-38*).

Regarding **claim 14**, in accordance with Abrishami reference entirety, Abrishami discloses a communication system for conducting a voice call and a fax communication of a communication terminal through an analog line and a digital line having a bandwidth (*Figs. 2-3 and description at col. 8, line 46 to col. 9, line 30 and thereafter*), comprising:

an interconnecting device (*Fig. 2; element 20 or element 21; or Fig. 3*) for relaying the voice call and the fax communication between an analog line and the digital line (*col. 6, lines 42-47 and thereafter*); and

a control apparatus (*Fig. 2; element 22*) for determining the bandwidth of the digital line available to said interconnecting device (*col. 6, lines 48-55 and thereafter*), said interconnecting device including,

a start signal receiving unit (*Fig. 3; element 31*) for receiving a fax communication start signal through the analog line from the communication terminal, the fax communication start signal indicating a start of the fax communication (*col. 9, lines 5-6, Abrishami discloses detector 31 discriminates the voice call and a facsimile*), and

a request signal sending unit (*Fig. 3; element 31*) for requesting, when said start signal receiving unit receives the fax communication start signal, of said control apparatus for controlling the digital line that the bandwidth of the digital line available to said interconnecting device be expanded from in the voice call (*col. 9, lines 6-13, Abrishami further discloses detector 31 notifies control process 22 and requests for the available bandwidth that can be allocated to that call without effecting the operations of the other virtual channels*).

Allowable Subject Matter

5. Claims 6-7 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

Art Unit: 2616

The prior art of record, considered individually or in combination, fails to fairly show or suggest the claimed method and apparatus of base claims 1 and 8 and further limit with novel and unobvious limitation of *"wherein when said start signal receiving unit receives the fax communication start signal while the interconnecting device relays the voice call of the communication terminal, said conversion mode determination unit changes the conversion mode of said signal conversion unit to have lower compression rate than in the voice call"*, structurally and functionally interconnected with other limitations in a manner as recited in the dependent claims 6-7 and 9.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Abrishami (USP 6,865,220).

Scott (USP 6,339,481).

Schuster et al (USP 6,483,600).

Jacobi et al (USP 6,249,531).

Morgan et al (USP 6,240,086).

Morgan, Fax Over Packet, downloadable at <http://www.telogy.com>, pages 1-13, 1998.

Texas Instrument, TNETV30XX High Density VoIP Gateway Solutions, pages 1-5, 2001.

8. Any inquiry concerning this communication or earlier communications from the

Art Unit: 2616

examiner should be directed to Frank Duong whose telephone number is 571-272-3164. The examiner can normally be reached on 7:00AM-3:30PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar can be reached on 571-272-7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Frank Duong', with a stylized, cursive script.

**FRANK DUONG
PRIMARY EXAMINER**

April 26, 2006